Amendments to the Claims

Please amend claims 1, 6, and 7 according to the following listing of claims:

1. (currently amended) A single crystal silicon segment having two major, generally parallel surfaces, one of which is the front surface of the segment and the other of which is the back surface of the segment, a central plane between the front and back surfaces, a circumferential edge joining the front and back surfaces, a surface layer which comprises a first region of the segment below the front surface and a distance, D_1, as measured from the front surface and toward the central plane, and a bulk layer which comprises a second region of the segment between the central plane and the first region, the segment being characterized in that

the segment has a non-uniform distribution of minority carrier recombination centers, with the concentration of the centers in the bulk layer being greater than the concentration in the surface layer and with the centers having a concentration profile in which the peak density of the centers is at or near the central plane with the concentration generally decreasing from the position of peak density in the direction of the front surface of the segment **and with the concentration generally decreasing from the position of peak density in the direction of the back surface of the segment**.

2. (original) The segment of claim 1 having a carbon concentration which is less than about 1×10^{16} atoms/cm^3.

3. (original) The segment of claim 1 having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

4. (original) The segment of claim 1 having a thickness ranging from about 500 microns to about 800 microns.

5. (original) The segment of claim 1 having a thickness ranging from about 800 microns to about 1200 microns.

6. (currently amended) The segment of claim 1 wherein the concentration of minority carrier recombination centers in the surface layer is less than about 1 x 10^{11} centers/cm^{3} ^{2}.

D1
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7. (currently amended) The segment of claim 1 wherein the concentration of minority carrier recombination centers in the surface layer is less than about 1 x 10^{13} centers/cm^{3} ^{2}.

8. (original) The segment of claim 1 wherein the distance D_1 is at least about 10 microns.

9. (original) The segment of claim 1 wherein the distance D_1 is at least about 30 microns.

10. (original) The segment of claim 1 wherein the distance D_1 is at least about 50 microns.

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11. (original) The segment of claim 1 wherein the distance D_1 is at least about 100 microns.

12. (original) The segment of claim 1 wherein the front surface is polished.

13. (original) A single crystal silicon segment containing minority carrier recombination centers and having two major, generally parallel surfaces, one of which is the front surface of the segment and the other of which is the back surface of the segment, a central plane between the front and back surfaces, the recombination centers having a non-uniform distribution between the front and back surfaces with a maximum concentration of the recombination centers being in a region which is between the front surface and the central plane and nearer to the front surface than the central plane, the concentration of the recombination centers increasing from the front surface to the region of maximum concentration and decreasing from the region of maximum concentration to the central plane.

14. (original) The segment of claim 13 having a carbon concentration which is less than about 1×10^{16} atoms/cm^3.

15. (original) The segment of claim 13 having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

16. (original) The segment of claim 13 having a thickness ranging from about 500 microns to about 800 microns.

17. (original) The segment of claim 13 having a thickness ranging from about 800 microns to about 1200 microns.

18. (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 5 microns form the front surface of the segment.

19. (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 10 microns form the front surface of the segment.

20. (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 20 microns form the front surface of the segment.

21. (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 40 microns form the front surface of the segment.

22. (original) The segment of claim 13 wherein the front surface is polished.

23-34. (withdrawn)